

Cyber Town at the Woodrow Wilson Center

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Program of Distinction Categories:

Leadership, Citizenship, and Life Skills

- Leadership Development
- Caring Relationships, Community Spirit

Science, Engineering, and Technology Literacy

- Science Engineering & Technology

Youth in Governance

- Youth & Adult Partnerships
- Youth in Organizational Governance
- Community Engagement
- Youth Decision-Making

Sources of Funding:

The initial funding source for Cyber Town at the Woodrow Wilson Center was a grant from PowerUp, which granted the center 20 computers and several educational software titles. Cyber Town is currently supported by a Children, Youth and Families at Risk (CYFAR) New Communities Grant. This grant provides funding for a program assistant and programming material. The local housing authority provides physical space, electric, and security for the lab. All of these funds are managed by the Maryland Cooperative Extension Somerset County CYFAR team which consists of the 4-H Educator, Family and Consumer Sciences Educator, and two program assistants. In addition to the above funding sources, the project is periodically supported with monetary donations from local civic organizations.

Knowledge and Research Base

Cyber Town at the Woodrow Wilson Community Center was established to provide youth with technology education and bridge the digital divide for rural youth. When the project began in 2002, the targeted youth who lived at the Crisfield Housing Authority had limited access to technology. The local school system did not have Internet connection and the local public library had only two Internet-connected computers available for public use. The project was introduced as a prevention program because concerned community members such as teachers, parents, youth, and business leaders did not want young people in their community to fall behind in our computer driven society. According to the National Telecommunications and Information Administration (2000) report, "Urban households with incomes of

\$75, 000.00 or higher are more than 20 times likely to have Internet access than rural households at the lowest income levels." According to the Census Bureau (2000), Somerset County had a median family income of \$17,979. A survey conducted by Maryland Cooperative Extension on youth who lived at the Crisfield Housing Authority indicated that $\geq 1.3\%$, ($n=47$, $SD=1$) had access to the Internet.

When the lab initially opened, the primary focus was technology education. This focal point was based on a community assessment completed by Maryland Cooperative Extension for the PowerUp grant. The need for technology education became a strong focus because in 2002, young people across the nation were becoming experts utilizing technology (Schauber, 2002). Yet in 2002, in Somerset County, many youth had never touched a computer. This was an alarming fact and had to be addressed in order to allow Somerset County youth to be competitive in the new age of technology.

To organize the after-school effort, the Somerset County Educational Intervention Team was established. This team included business owners, teachers, youth, parents, community agency representatives, and Maryland Cooperative Extension (MCE) faculty and staff. The team developed plans to expose youth to technology and teach them computer skills. They believed this was the answer to "fixing" the technology gap in Crisfield. The delivery method that the team decided upon was to establish an after-school program. This decision was based on the fact that limited after-school programming was available to community residents. The team also wanted to ensure that the youth participated in a structured program that had a focused, concentrated curriculum and would allow frequent daily contact with a designated group of youth.

Once the after-school program was established, educators and program assistants began to record qualitative data on the youth participating in the program. The qualitative reports indicated that youth were not learning to use the computers as quickly as expected. The members of the Somerset County Educational Intervention Team met and reviewed the findings and discovered that many youth who attended the program had poor reading skills. According to Tompkins and Hoskisson (1991), a student's ability to read directly impacts his or her overall educational performance. Students who are low literacy readers face difficulty in all subject areas. Based on this research, the Somerset County Educational Intervention Team then placed an intense emphasis on building the youth's reading ability.

The team reviewed the research on reading to develop a concrete educational plan utilizing computers for instruction. Castellani and Jeff (2001) state, "The critical reading processes that computer technology can support include: comprehension (annotating, linking ideas, etc.), idea generation (brainstorming), analysis (articulating and classifying positions, reacting to others' comments), reflection (using an electronic journal to develop metacognitive awareness--reflecting on topics, tasks, learning strategies, etc.), composition (writing papers), and communication (electronic mail)." Computers are successful tools in teaching reading because they provide for a high level of interactivity, which means that there is two-way

communication between the user and the computer (Meyer & Rose, 2000). Interactivity can be extended beyond one student using one computer to many students using many computers, such as with electronic journals which can be a method or a forum used to discuss student readings and share intellectual thoughts. A high level of interactivity and sharing thoughts with other students encourages students to become more actively involved with what they are reading and builds comprehension skills (Leu, 2000).

Needs Assessment

The initial assessment was performed in coordination with PowerUp to assess the community's need for technology. This assessment was completed through community asset mapping, focus group meetings, meetings with local leaders, and surveys of community businesses, members, and leaders. The results of the assessment led the PowerUp organization to grant 20 computers and several educational software programs to our site. As part of the needs assessment, the recommendation was made that the Somerset County Educational Intervention Team be established. The assessment unveiled that the number of youth who had a safe after-school environment and exposure to technology was marginal. It also found that there were extremely low numbers of safe, structured after-school programs available to youth in Crisfield. Another finding indicated that computer training was needed for youth in the community. Youth focus groups revealed that young people wanted to learn simple word processing skills and how to use the Internet.

Goals and Objectives

Cyber Town at the Wilson Center is the educational hub of a primarily African-American community, providing a safe and productive learning center for the families living in Woodrow Wilson Housing Authority. Its purpose is to help youth:

- Increase their computer literacy skills.
- Strengthen their ability to complete homework.
- Build reading comprehension.
- Learn to use E-mail, the Internet, and the World Wide Web.

Target Audience

The Cyber Town at the Wilson Center is directed towards:

- Youth who live in the Crisfield Housing Authority
- Members of the Cyber Town 4-H Club, youth who attend the Woodrow Wilson Community Center after-school program
- Fifty four youth (approx.), ages 8-12
- Race – 85% African American, 10% White, 5% Hispanic

Program Design and Content

Type of Program

The computer lab is open daily as an after-school program site for children to gain instruction in reading, help with homework, and assistance with research. It offers recreational options such as interactive computer games, e-pals, and basketball. The after-school location provides assistance with homework such as access to research

via the Internet. The program provides extensive instruction in reading to build comprehension due to demonstrated participant need.

Methods Used to Deliver Programs

The children attend the lab daily from 3:30 pm to 6:30 pm. The hours of operation reflect the needs of the user. The participants' first responsibility is to complete their homework. When the youth arrive, their homework agenda is presented to the computer lab program assistant. Youth are first assisted with homework, and then their work is checked for accuracy. Once they have completed their homework, they are provided with individualized computer-aided instruction.

Daily Schedule:

Day	3:30 to 4:00	4:00 to 5:00	5:30 to 6:00	6:00 to 6:30
Monday Tuesday Wednesday Thursday	Arrival Snack	Youth present homework agenda to either the computer lab Program Assistants, 4-H Educator, Family and Consumer Science Educator or one of the community volunteers. The youth are then assisted with homework and their homework is checked for accuracy.	Youth are provided with individualized computer aided instruction in reading based on of reading test scores indicating competencies.	Free time to surf the web, play computer games, basket ball or participate in specialty program.
Friday	Arrival Snack	Specialty Program- 4-H projects, health department prevention programs, art council art appreciation, EFNEP nutrition programs, and many more.	Free time to surf the web, play computer games, basket ball or participate in specialty program.	Free time to surf the web, play computer games, basket ball or participate in specialty program.

The individualized instructional levels in reading from which the youth work are based on the reading level assessment software program, teacher recommendations, and reading scores. The computer software programs have students read stories and answers questions about what they have learned. Computer-generated prompts analyze the children's reading level and give them challenging reading scenarios. The educator and program assistants work with the students to provide additional support in reading

and writing. The instruction is closely monitored for each child. The children are encouraged and taught how to use word processing to write stories and keep electronic journals. The educator and program assistant have taught the children to utilize e-mail and often write the youth messages of encouragement to help build self-esteem. The lab also provides a lending library for the children, invites community leaders to read stories to the children, and promotes family reading events.

Curricula and/or educational materials

The students are assessed and individual reading assignments are given based on the needs of the students. Some of the software we use is listed below.

Software	Manufacture	Description
Educator's Choice Phonics and Reading Accelerator Grades 1-4	Topics Entertainment	<i>Phonics Vowel & Consonant Games</i> (focusing on consonant sounds, short and long vowels, phonic rules, blends, beginning reading, and more key concepts), <i>Intermediate Phonics Games</i> (covering everything from sound recognition and spelling to homonyms and synonyms), <i>Step into Reading & Creative Writing</i> (which helps kids understand and develop essential creative thinking skills and strong writing abilities)
Reading Blaster Vocab 9-12	Knowledge Adventure	Build Vocabulary and Pronunciation Skills Grades 4-6 Strengthen vocabulary and pronunciation skills with Reading Blaster Vocabulary. Students learn to find meanings through the use of context clues and identify parts of speech. They develop spelling and critical-thinking skills while improving problem-solving strategies. Correlated to NCTE & IRA standards. -- CURRICULUM SKILLS -- * Improve reading comprehension * Build vocabulary and pronunciation skills * Learn about prefixes suffixes and root words
Reader Rabbit Learn to Read With Phonics	The Learning Company	Designers paid attention to details that are important for learning: characters meticulously pronounce words and sound out letters in clear children's voices. Each activity can be played on five different levels, and kids can check their progress and print study words. The program introduces sight words for memorization as well as words that must be constructed by sounding out. Some of the virtual books in this program are more entertaining and engaging than actual phonics texts.

Reading Blaster Ages 7-8	Vivendi Universal	<i>Reading Blaster</i> is part of the Blaster Learning System, an integrated line of game-based learning software. Blaster Learning System missions use game play to teach fundamental math and reading skills to kids ages 5 to 9. After mastering the essentials, kids move on to Cross Terrain Challenge, created to sharpen critical-thinking skills through extreme game adventures.
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Examples of Challenging Interactive Material for Children are listed below:

<p>Agriculture Research Service Activities</p> <p>Colorful and interesting collection of articles on many different aspects of food production. Includes quizzes. Doesn't shy away from making declarations like: "Plants Clean Waste Water and Grow Better by Eating Fish Poop." The link below takes you to the table of contents page. Designed by the Agriculture Research Service with the USDA.</p> <p>www.ars.usda.gov/is/kids/contents.htm</p>
<p>Cool Science for Curious Kids</p> <p>Excellent science site explores animal classification, air quality, metamorphosis, and other science topics in a graphical and easy to read format. Includes experiments. Designed by the Howard Hughes Medical Institute.</p> <p>www.hhmi.org/coolscience/</p>
<p>Cyber Kids</p> <p>Designed for kids to have fun while they learn. Cyber Kids contains a reading room, theater, games and puzzles, a free on-line magazine and launch pad. Many Shockwave activities here; Shockwave is downloadable from the site.</p> <p>www.cyberkids.com/</p>
<p>Directorate of Time</p> <p>Older elementary students can calculate current time in various world time zones. "The Department of the Navy serves as the country's official timekeeper, with the Master Clock facility at the Washington Naval Observatory.</p> <p>tycho.usno.navy.mil/time.html</p>
<p>Kid's Clubhouse</p> <p>Contains lots of activities, divided by grade levels. Includes weekly logic problems/brain teasers and discussions of kids' books. By the Houghton Mifflin Company.</p> <p>www.eduplace.com/kids/index.html</p>
<p>National Geographic Kids</p> <p>Contains science experiments and an excellent archive of colorful features. Some sections require Shockwave, which is downloadable from the site. From the National Geographic Society.</p> <p>www.nationalgeographic.com/kids/index.html</p>
<p>The Star Child Project: Connecting NASA and the K-12 Classroom</p> <p>Covers Astronomy, Earth, Galaxies, Moon, Planets, Space, Stars, Sun and the</p>

Universe. Some short basic material with some parts written simply, others less so. Rich links to other projects.

heasarc.gsfc.nasa.gov/docs/StarChild/

Think Quest Junior

Each year, Think Quest requests submissions by grade school students of all ages for their educational Web design competition. Think Quest Junior is the grades 4-6 version of this competition, and the entries--submitted by teams of students--are here for your browsing pleasure, organized by topic area.

There are many fabulous sites here.

www.thinkquest.org/tqjr/

Partnerships and collaborations

Somerset County is located in a rural community and we work closely with other community organizations. The Somerset County Health Department provides special activities and programming for the youth at the after-school site. They have additionally provided mini-grant funding and supported the lab through referring needy families to the program. Crisfield Housing authority supports the programming efforts at Cyber Town by providing a building, electricity, phone, security system, and cleaning maintenance. The Crisfield Police Department provides security, family and youth referrals, and supports our commitment to keep youth off the streets. University of Maryland Eastern Shore provides student volunteers.

Program Evaluation

The Cyber Town evaluation design details several methodologies to assess program process and capacity. Student outcomes are evaluated using: 1) teacher assessment; 2) report cards; 3) attendance records; 4) GPA; 5) software assessment. The after school program is evaluated utilizing the following methods: 1) focus groups; 2) participant surveys; 3) comment cards. The capacity evaluation includes interviews with key stakeholders including the after school program coordinator, referral teachers and information from focus groups.

Cyber Town was evaluated using a formative evaluation using a pre-post test methodology. Students filled out a pre-program evaluation at the beginning of the year and then completed a post-program evaluation at the end of the program. The program impacts were evaluated through a pre and post program entry test.

Outcomes and Impacts

The success of the after-school site's ability to increase reading comprehension was measured using a pre- and post- entry test. As each individual entered the lab they were given an age appropriate reading test. After one year of treatment the group was then given an age appropriate post reading test. Descriptive statistics reveal that the pre-test scores had a mean of 52% (SD=22) this demonstrates that the test scores had a wide variance but overall were low. The highest score that could be achieved was 100%. Overall the youth did not perform well on the pre-test. After participating in the Cyber Town after-school program, the youth were tested and the mean score was 73% (SD=8). This demonstrated that the youth scored much higher on the test. Their scores where a good deal closer to the

mean illustrating that more students scored nearer to the average. The percentages also showed that overall scores increased by 21%.

Participants in the Cyber Town program were reported to have less school office referrals than youth who did not attend. This data was recorded and reported by the principal of the local elementary school. In addition to better behavior, teachers reported that youth who attended the Cyber Town after-school program turned in complete and accurate homework. The final report cards of youth who participated in the program showed a continual increase in student GPA's over the nine month grading period.

<i>Pre-test</i>		<i>Post-test</i>	
Mean	52.14	Mean	72.67
Standard Error	3.17	Standard Error	1.98
Median	56	Median	76
Mode	56	Mode	77
Standard		Standard	
Deviation	22.19	Deviation	6.88
Range	78	Range	56
Minimum	9	Minimum	43
Maximum	87	Maximum	99
Sum	2555	Sum	3561

Communication to Stakeholders

Progress reports are sent to CYFAR to keep funding partners abreast of program developments. Press releases are submitted to local newspapers and keep the community up-dated about the program's success. The project has been presented at several national meetings. A youth-created newsletter will be sent to community members starting in fall 2005.

Program Sustainability

The program is community focused and develops leadership skills in participants by teaching skills to implement change. Darling and Randel (1999) determined a healthy community has three dimensions; residents hold a common vision, leaders identify and resolve issues, and organizations adapt to an ever-changing environment. The long term sustainability of this program is promising because leadership is being developed in the local community members and they are being taught how to seek funding and report success to stakeholders. The Somerset County Educational Team is committed to providing support and sustaining the program.

Replication

Across the nation, safe educational after-school programming is needed by families to support working parents. The project has been successful and seeks to continually improve. It has provided a wealth of knowledge on community strengthening, technology literacy, and building reading comprehension. Publication of project successes is being sought in professional journals and other media to allow others to learn from the program's strengths and weaknesses.

Rationale and Importance of Program

This program is important for other professionals because it is a practical demonstration of the national goals of the 4-H youth development program which include:

- Developing volunteers
- Strengthening and expanding the 4-H club program
- Outreach to underserved and under-represented youth

After-school programming is greatly needed by working families across the nation. This program provides a model others can utilize in operating similar computer based programs. It illustrates that when working with youth, educators may discover deeper problems than originally anticipated and adaptations must be made to meet the needs of those young people.

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